

REMARKS/ARGUMENTS

In response to the Office Action dated December 17, 2003, please consider the following remarks.

In the Office Action issued December 17, 2003, claims 1-4 and 10-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sicre et al., U.S. Patent No. 6,161,062 (Sicre), in view of Doty, U.S. Patent No. 5,841,537 (Doty).

Claims 1-24 are now pending in this application. Claims 1-4 and 10-15 have been amended to more particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 5-9 and 16-24 have been withdrawn due to the election with traverse filed September 24, 2003 in response to a restriction requirement issued June 27, 2003.

The applicant respectfully submits that the present invention, according to claims 1-4 and 10-15, is not obvious over Sicre in view of Doty. Sicre discloses a system for piloting an aircraft including a non-inertial Altitude Heading Reference System (AHRS) associated with a compass. The information supplied by the AHRS is periodically corrected using information from two GPS receivers having antennas mounted on the aircraft. As the Examiner states, Sicre does not disclose calculating the attitude based on the aircraft-fixed angular rates p , q , r . Doty discloses an inertial reference system for determining the attitude and rate of change of attitude of a vehicle such as an aircraft. The system includes an inertial measuring unit (IMU) that measures the roll, pitch, and yaw of the aircraft.

One of skill in the art would not be properly motivated to combine the teachings of Sicre and Doty because the purpose of Sicre is to provide an accurate non-inertial system, while Doty discloses an inertial unit. As Sicre states: "According to the invention there is proposed a system for aiding the piloting of an aircraft, which comprises a head-up display and its computer, the computer comprising means for controlling the display in order to exhibit symbols for aiding piloting, and especially an aircraft attitude symbol, characterized in that it furthermore comprises a non-inertial attitude and heading unit AHRS associated with a compass, for supplying heading, attitude, acceleration and vertical velocity information." Meanwhile, Doty discloses using an inertial measuring unit. Thus, Sicre discloses a system that purposely does not use an inertial unit, while Doty discloses an inertial unit. One of skill in the art would not be properly motivated to combine the unit disclosed in Sicre, which is taught as not having an inertial unit, with the inertial unit disclosed by Doty, because this combination is contrary to the explicit teaching of Sicre.

Furthermore, even if the combination suggested by the Examiner were made, the result would not be the present invention, as claimed. Sicre discloses periodically correcting the information supplied by the AHRS using information from two GPS receivers having antennas mounted on the aircraft. Doty discloses an inertial measuring unit (IMU) that measures the roll, pitch, and yaw of the aircraft.

By contrast, the present invention, for example, according to claim 1, requires air data including speed, altitude and angle of attack of the aircraft and correcting the calculated attitude using the air data and the heading information. Neither Doty nor Sicre discloses or suggests correcting the calculated attitude using air data including the angle of attack of the aircraft. In particular, Sicre discloses the GPS receiver arrangement supplying an attitude and heading of the aircraft (Col. 4, lines 51-55) and position, velocity and time (Col. 5, lines 9-14). Sicre does not disclose or suggest using or determining the angle of attack of the aircraft. Likewise, Doty does not disclose or suggest correcting the calculated attitude using air data including the angle of attack of the aircraft.

Thus, the present invention, according to claim 1, and claim 10, which is similar to claim 1, and according to claims 2-4, which depend from claim 1, and claims 11-15, which depend from claim 10, is not obvious over Sicre in view of Doty

Applicant notes that the Examiner has not responded to Applicant's traverse of the restriction requirement. Applicants reiterate their traversal of the restriction requirement with respect to the basis given for making the requirement. Along these lines, the Examiner states that subcombinations are distinct from each other if they are shown to be separately usable. The Examiner states that in this case, invention of group II, a method for calculating redundant attitude using magnetic vectors, has separate utility from the invention of group I, a method for calculating

redundant attitude. In particular, the Examiner states that the invention of group II "has separate utility such as use in dynamometers and flow sensors." Applicant cannot understand how a method for calculating attitude of an aircraft is usable in dynamometers and flow sensors. Applicants respectfully request a written explanation of this utility.

In addition, Applicants traverse the restriction requirement on the basis that search and examination of all claims in the application can be made without serious burden to the Examiner even if it does includes claims to independent or distinct inventions. In particular, the Examiner classifies both groups of claims in the same class and subclass. As a result, both groups of claims may be searched and examined with little or no burden on the Examiner, and certainly no serious burden on the Examiner, as is required by MPEP §803.

Furthermore, since this application is a national phase application filed under 35 U.S.C. § 371, unity of invention applies to this application. Accordingly, the restriction requirement is improper and should be withdrawn.

Each of the claims now pending in this application is believed to be in condition for allowance. Accordingly, favorable reconsideration of this case and early issuance of the Notice of Allowance are respectfully requested.

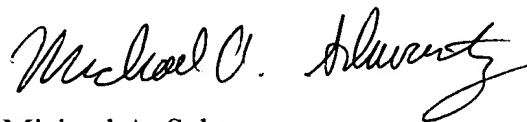
Additional Fees:

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with this application to Deposit Account No. 19-5127 (19391.0025).

Conclusion

In view of the foregoing, all of the Examiner's rejections to the claims are believed to be overcome. The Applicants respectfully request reconsideration and issuance of a Notice of Allowance for all the claims remaining in the application. Should the Examiner feel further communication would facilitate prosecution, he is urged to call the undersigned at the phone number provided below.

Respectfully Submitted,



Michael A. Schwartz
Reg. No. 40,161

Dated: March 26, 2004

Swidler Berlin Shereff Friedman, LLP
3000 K Street, N.W., Suite 300
Washington, D.C. 20007
(202) 424-7500